Wild Chinook in the Northwest

Salmon Through the Ages

Proud boy and Chinook salmon, Columbia River, 1917.

Wild salmon once filled the rivers of the Pacific Northwest. Since the ice ages, this muscular fish has embodied the health and vitality of this region. Prior to European settlement in the Northwest, salmon were an important food staple for some local tribes and the heart of many Native American tribes' culture and heritage.

When Lewis and Clark were exploring the Columbia and Snake River basins in 1805, they reported Indians catching massive quantities of salmon, 10 - 16 million fish by current estimates. Sixty years later, the first salmon cannery in North America was established near Astoria, marking the first of commercial salmon harvests. By the early 1900's, it was estimated that 30 million wild salmon and sea-run trout came upstream to spawn. Despite weakening salmon stocks from commercial fishing and streamside development, the fishing industry was valued at $1.2 billion annually. By the late1980's, commercial fishing had decreased by 85 percent.

Overfishing, habitat destruction, fish hatcheries, water pollution and large-scale environmental changes have caused salmon runs to decline in the Pacific Northwest.

Since European settlement, 9 out of 10 wild salmon runs and 100 distinct salmon stocks have disappeared from the region. Three times that many are at risk of disappearing and losing their habitat.

"Salmon are the soul of the Pacific Northwest," writes Joe Cone. "In their return upriver to spawn, they are the symbol of the life force of this region." Their declining numbers are an early warning sign that there is much more at stake than just the decline of their population.

Spokane women drying salmon.

Horse seins were used to snare salmon.

Cannery worker and the catch of the day.

Native American fisherman spearing salmon at Celilo Falls, Columbia River.

Assembly line of workers process salmon.

Salmon:
The Food Chain and Food Web

FOOD CHAINS follow a single path as different creatures eat each other for energy.

EXAMPLE:
PHYTOPLANKTON (is eaten by) ZOOPLANKTON (which is eaten by a) SQUID (which is eaten by a) SALMON (which is eaten by a) KILLER WHALE

FOOD WEBS explore how all life is interconnected as animals have more than one way to find food.

EXAMPLE:
HERRING eat zooplankton and many SEA BIRDS eat HERRING. The sea birds attract KILLER WHALES. KILLER WHALES eat SEA LIONS and SALMON are eaten by SEA LIONS, SEA BIRDS and KILLER WHALES. DECOMPOSERS eat everybody!

SPLASH!
Stormwater Pollution: Learn and Share

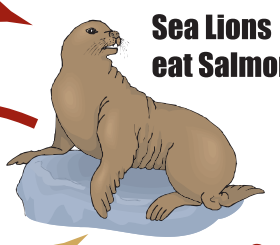
City of Eugene
Stormwater Management Program

A FOOD CHAIN AND...A FOOD WEB

SALMON FOOD CHAIN

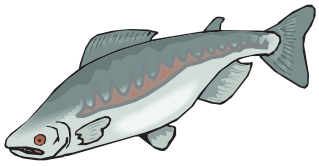
OCEAN FOOD WEB

Killer Whales eat Sea Lions



Sea Lions eat Salmon

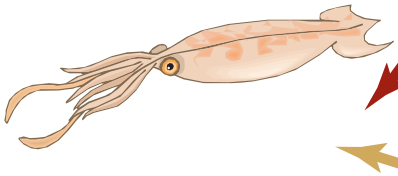
Killer Whales eat Salmon



Killer Whales eat Sea Birds

Sea Birds eat Salmon

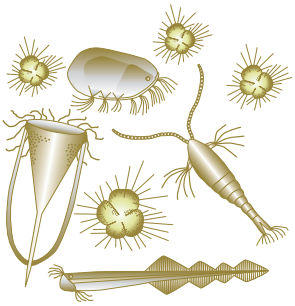
Salmon eat Squid



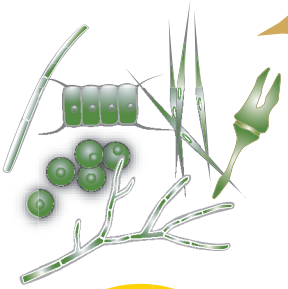
Sea Birds eat Herring

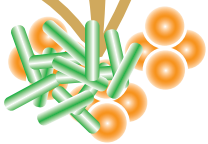
Squid eat Zooplankton

Herring eat Zooplankton



Zooplankton eat Phytoplankton





Decomposers eat everybody!

Phytoplankton create food from the sun

Salmon Decline Affects Everyone

The Pacific Northwest is losing its salmon. Rivers like the Willamette were once braided with numerous side channels that provided ideal spawning grounds and rearing habitat for juvenile salmon. Over time, suitable habitat has been reduced or degraded, threatening salmon populations everywhere.

In Eugene, salmon live in the Willamette River, many of the small streams that flow into the Willamette, and portions of Delta Ponds during one or more stages of their life cycle. Juvenile salmon (fry and smolts) migrate from upstream areas to seek shelter in small alcoves and side channels along the Willamette where they can feed, hide from predators, and grow for up to a year before continuing their journey downstream to the ocean. The cycle continues when returning adult salmon migrate from the ocean through Eugene from May through July, heading back to their "home stream" to spawn.

Why should we be concerned? Healthy salmon populations are a direct indicator of healthy rivers. The preservation of wild salmon is directly related to natural resource protection, growth management and our quality of life. If we do everything we can to protect salmon and salmon habitat now, we can ensure salmon will be abundant in future generations.

Many things we do in our every day lives, from washing our cars to using pesticides in our yards, can have a negative impact on water quality. Only by being aware of how pollution affects salmon and by changing our habits can we help keep water clean and salmon populations healthy. It will take a commitment by citizens, public institutions, and private companies alike if salmon are to survive.

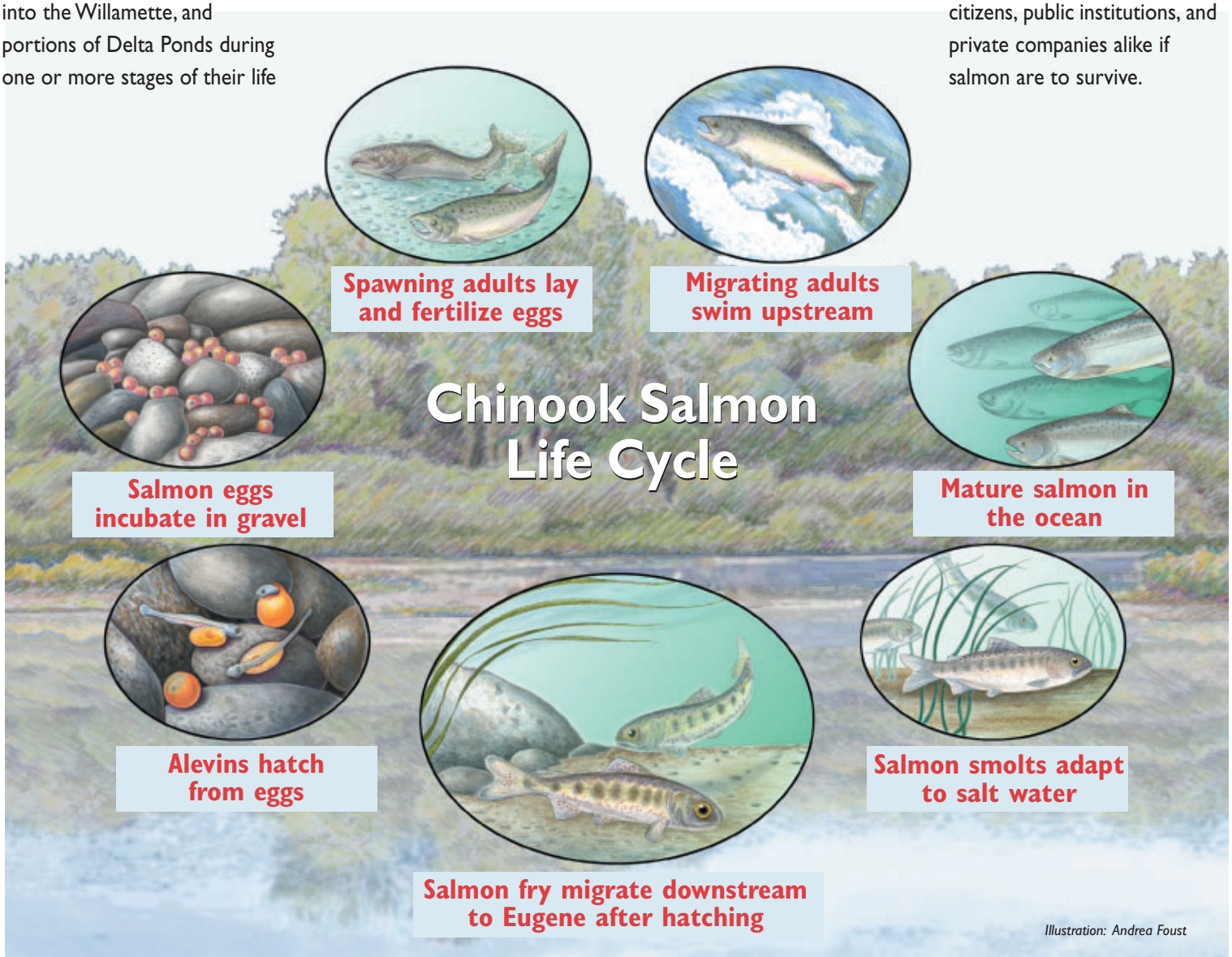


Illustration: Andrea Foust